

MEASLES UPDATE

National Immunization Program (NIP), Centers for Disease Control & Prevention Measles Activity in U.S. through Week 19 (ending May 15)

No. of confirmed measles cases reported to MMWR by Week 19, 2004:	8
No. of confirmed measles cases reported to NIP by Week 19, 2004:	22
No. of confirmed measles cases reported for same period in 2003:	22
Total No. of U.S. outbreaks (3 or more linked cases) in 2004:	2

As of MMWR Week 19, 8 cases of measles had been reported to MMWR compared to 22 cases reported to the National Immunization Program (NIP). This is similar to number of cases reported through Week 19 in 2003. All confirmed cases (N=22) reported by 8 states are listed by rash onset date in the included table. **A total of 18 of the 22 (81%) cases this year have been identified as import associated.** Note: Please see last page for Rubella and Mumps activity as of Week 19 (ending May 15, 2004).

2004 Measles Outbreaks:

IOWA Measles Outbreak (3 cases) , March 13–24, 2004

Source: INDIA

<http://www.cdc.gov/mmwr/PDF/wk/mm53d319.pdf>

A CDC health advisory was issued on 3/18/04 to state health departments alerting them to the measles exposure from a 19-year-old unvaccinated U.S. resident returning from India on March 12th on two Northwest flights; NW 039 from Amsterdam to Detroit, Michigan; and NW 3786 from Detroit to Cedar Rapids, Iowa. The notice on the Health Alert Network (HAN) recommended vaccination or administration of immune globulin for identified exposed contacts in accordance with ACIP recommendations and enhanced surveillance for measles cases. Michigan, Iowa and Texas issued state wide health advisories. A *MMWR dispatch* was prepared in collaboration with the state health departments and issued on March 19, 2004. One import and 2 spread cases occurred.

Multi-state Measles Outbreak Among Internationally Adopted Children March 22 – April 18, 2004

WASHINGTON (7 cases); MARYLAND (1 case) and NEW YORK STATE (1 case)

Source: CHINA

<http://www.cdc.gov/mmwr/PDF/wk/mm5315.pdf>

As of May 18, 2004, investigators had identified 10 confirmed measles cases associated with adoptees who traveled to the United States from China during March 2004s). The 10 cases range in age from 12 months to 19 years. Since April 18, 2004, there have been no cases and all the cases have recovered without complications.

The confirmed cases include 9 imported cases among adopted children aged 12 to 18 months, who acquired their infection while in China and traveled to three states (Maryland, New York and Washington) during March 26-27, and one import-linked case in a female student aged 19 years from California. The California student had close contact to one of the adoptees while staying with one of the Washington families on April 2-4 while their child was infectious. The student had a non-medical exemption and had not received measles containing vaccine. Upon her return to California, she was received IG then quarantined in her off-campus home. She developed a rash on April 18, 14-16 days following her contact with the adopted child. She was diagnosed with measles. No other cases in the U.S. have linked to this outbreak have been identified.

Recently, Chinese authorities reported that the last case of measles at the Zhuzhou Child Welfare Institute in Hunan Province occurred on April 23, 2004, and that the recommended vaccination campaign of all eligible children has been completed. Since no cases of measles have been reported from the orphanage in the past 21 days (one incubation period), the outbreak appears to be controlled. CDC is now recommending the end of the temporary suspension from the affected orphanage and the resumption of standard adoption procedures. .

Of interest, the Norwegian Institute of Public Health, <http://www.fhi.no/> confirmed 4 cases in adoptees from the same orphanage in Hunan province as the American adoptees with measles. The Norwegian cases had onsets between 24 March and 2 April. One other adoptee in Spain became ill during the flight to Spain on May 1. See from Norway below:

“Measles outbreak in Norway in children adopted from China

The Norwegian Institute of Public Health was alerted to this outbreak in early April by the mother of one of the sick children. A few days later, we became aware of a similar outbreak of 6 confirmed and three possible cases among adoptees from China who were taken to the United States in March 2004 [1]. Due to the international character of the outbreak and because we assumed that some of the children had been infectious during their journey from China to Norway, an early warning was issued through European Union Public Health Information Network Health Surveillance System for Communicable Diseases (EUPHIN HSSCD) on 14 April. A response from Spain reported one possible case of measles in an adoptee from Hunan province in China. Our epidemiological investigation, which included an internet search and contact with the parents of the adoptees, found that the Norwegian adoptees came from the same orphanage in Hunan province as the American adoptees with measles. The children were all 11-12 months old at the time of the

outbreak, with the exception of one who was 16 months old. The orphanage staff had informed the adopting parents that the children had not been vaccinated against measles. The parents were not officially informed, but some of them reported having heard rumours, of an outbreak in the orphanage (there are around 400 children in the orphanage, of all ages).

The Norwegian parents travelled to China as a single group. They collected their children from the orphanage on 22 March, and left Beijing by plane, arriving in Norway via Copenhagen on 31 March. Before the flight, one child was admitted to hospital in Beijing due to illness with a rash and her journey to Norway was delayed by a few days. The hospital diagnosed pneumonia, but measles was not confirmed. Three children came down with fever and a rash shortly after their arrival in Norway and two of them were admitted to hospital. One case was laboratory confirmed as measles in the hospital, one was clinically diagnosed as a typical case of measles, and the third was initially regarded as not measles. Later, laboratory testing at the reference laboratory at the Folkehelseinstitutt (serum and saliva) confirmed measles in all four children who had developed a rash, including the child who had been admitted to hospital in Beijing.

The children who went to the US and developed measles had an onset of illness between March 22 and April 18. The Norwegian cases had onsets between 24 March and 2 April. The Spanish case became ill during the flight to Spain on 1 May. The four uninfected children were not tested for susceptibility. Two of the four children who stayed well during the outbreak were given immunoglobulin on 6 April. At least one of the measles patients admitted to hospital in Norway was malnourished, but all the children with measles are reported to have recovered fully. There have been no reports of secondary cases in Norway during this outbreak.

The vaccination programme in Norway includes one dose of MMR at the age of 15 months and one at the age of 13 years. Over the last 4 years, 0-8 cases of measles have been notified per year in Norway, all either imported or linked to importation, and seldom resulted in any secondary cases in the country. Many of the measles cases in recent years have been in refugee children who have fallen sick shortly after arrival in Norway."

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Measles Outbreak in Mexico - Mexican authorities plan to report 2 new laboratory confirmed cases from Acuna (Coahuila), Mexico, just across the river from Del Rio, Texas (Val Verde County). There is a 3rd case in Mexico from Campache on the Yucatan Peninsula also to be reported. Mexican health authorities have declared a state of national alert due to an ongoing outbreak in the central part of the country. They have also announced a vaccination campaign. Since May 8, **64 confirmed** cases had been reported by the Ministry of Health. Of the cases registered to date, 43 have occurred in Mexico City, 15 in the neighboring state of Mexico, and 3 in the state of Hidalgo, 1 in Campeche and 2 in Coahuila. The 1st action taken to manage the outbreak was the vaccination of all susceptible individuals residing in the areas where the cases were detected. The 2nd stage will be vaccinating all Mexicans between the ages of 13 and 39, considered to be the most vulnerable group. Throughout the country, 2.5 million doses of the vaccine have already been distributed.

No cases have been reported in Texas. As a precaution, the Texas Department of Health is advising those traveling to Mexico to make sure they have been vaccinated against measles. Standard measles vaccination recommendations call for one dose of the vaccine at 12 to 15 months of age and a second dose at 4 to 6 years of age. But the advisory recommends that children who will be visiting Mexico receive the second dose 28 or more days after the first dose. The advisory also recommends that children 6 to 11 months old who will be visiting Mexico receive the first dose of vaccine now and a second dose at 12 to 15 months of age. A third dose is recommended for these children when they are 4 to 6 years old. These recommendations are for children over 6 months of age, not under 6 months and are consistent with ACIP guidelines for all international travelers.

U.S. MEASLES cases (N=22) reported by rash onset date:

#	Proj	Age /dob	Rash onset Date	Vacc	Spread Cases?	Reported To MMWR?	Viral Specimens Received at CDC	MEASLES as of May 15, 2004 Comments / Source Information
01 IMP	HI	4-yr-old female	12/31/03	No	No	Yes, For 2004	No	Single IMPORT, Japanese visitor arrived 12/28/03. Case record will remain in 2004 dataset (listed as indigenous in NETSS—to be changed by Hawaii to import).
02 IMP	CA	14-yr-old male	2/10/04	Unk	? possibly the 7 - mo old	No	No	IMPORT, Egypt , residency San Francisco 3 cases –possibly linked? This Patient treated at <u>neighborhood</u> clinic 2/12-13. See 7-mo-old below #04 (same clinic another day). No direct linkage known.

#	Proj	Age /dob	Rash onset Date	Vacc	Spread Cases?	Reported To MMWR?	Viral Specimens Received at CDC	MEASLES as of May 15, 2004 Comments / Source Information
03 IMP	CA	9-mo-old	2/22/04	No	No	No	Yes, D3	Single IMPORT/Philippines; U.S. military dependent returning to L.A. on 2/22 (day of rash) after baby & family visited family t in the Philippines. Passengers were notified. No spread cases were identified. FLIGHT PR12 from Manila on 2/22/04.
04 unk	CA	7 mo-old	2/27/04	No	Yes, 1 (#07)	No	No	San Francisco cluster, possible outbreak. Same neighborhood as import from Egypt. No lab. conf by epi-linked to mother below
05 IMP	NYC	13 mo old male, Bronx	2/28/04	No	No	No	No	Single IMPORT/U.S. resident from Bangladesh Returning 2/18/04 following 3.5 mo stay. A total of 146 children were exposed.
06 IMP	NYC	9-mo-old female, Brooklyn	3/3/04	No	No	No	Yes, np D8	Single IMPORT/U.S. resident from Bangladesh Hospitalized in Brooklyn, IgM+ Baby & family had been in Bangladesh for 3 months, returning 2/17. Hospitalized 3 wks for diarrhea while in Bangladesh for 3 weeks prior to return to U.S. A total of 93 persons were exposed.
07 unk	CA	24 year old female	3/6/04	Unk	No	No	No	San Francisco 2-case chain, possible cluster of 3 (neighborhood). This IgM+ case is the mother to the 7 mo old above
08 IMP	HI	23-year-old male	3/9/04	Unk	Unk	Yes, Wk 11	No	U.S. resident returned from India on 3/9/04.
09 unk	NJ	1-year-old female	3/10/04	No	Unk	Yes	No	Middlesex County, IgM+ No travel
10 IMP	IA	19-year-old male	3/13/04	No	Yes, 2 cases	Yes	Yes, D8	Linn & Johnson Counties, Iowa Outbreak Traveled with student group to New Delhi, India. This case-student as well as 2-3 others in the student group were non medical exemptions. He is epi-linked to these other cases (fellow students sick in INida). He is the source to 2 US cases below (his unimmunized sister and a passenger seated next to him on the flight. MMWR Dispatch was published. NW flight 039 from Amsterdam to Detroit and NW 3786 from Detroit to Cedar Rapids, on 3/12/04.
11 trac	IA	16-year-old female	3/22/04	No	No	Yes	Yes, D8	Linn & Johnson Counties, Iowa Outbreak Source is her brother-#10 -import from India She received vaccine on 3/13 as result of Exposure to infectious brother when he arrived in Iowa on 3/12. She had been previously unimmunized with a non medical exemption.
12 trac	IA	21 year old male	3/24/04	Yes, 2 MMRs	No	Yes	Yes, D8	Linn & Johnson Counties, Iowa Outbreak Vaccinated college student who sat next to the 19-year-old import above #10 on the plane from Detroit to Cedar Rapids on 3/12. This spread case is resident of Iowa City (Johnson County), He was IgM+ and met case definition. Hx of 2 doses (@15 mos & 15 years of age)
13 imp	WA Twin	14 mos	3/22/04	No	Yes	No		Outbreak among Adoptees/China King County
14 imp	WA Twin	14 mos	3/23/04	No		No		Outbreak, Adoptee/China King County
15 imp	WA	12 mos female	3/30/04	No		No		Outbreak, Adoptee/ China King County
16 imp	MD	12 mos female	3/31/04	No		Yes, During Wk 20	Yes, Unsuccessful	Outbreak, Adoptee/ China
17 imp	WA	12 mos female	4/3/04	No		No		Outbreak, Adoptee/China King County
18 imp	WA	18 mos female	4/3/04	No		No		Outbreak, Adoptee /China King County
19 imp	WA	13 mos female	4/3/04	No		No		Outbreak, Adoptee / China Snohomish County

#	Proj	Age /dob	Rash onset Date	Vacc	Spread Cases?	Reported To MMWR?	Viral Specimens Received at CDC	MEASLES as of May 15, 2004 Comments / Source Information
20 imp	WA	12 mos female	4/6/04	No		No		Outbreak, Adoptee/ China King County
21 imp	NYS	13 mos female	4/10/04	No		Yes	Yes, H1	Outbreak, Adoptee/ China Ulster County
22 trac	CA	19-old-female	4/18/04	No, (PBE)	No	No	Yes, H1	Outbreak, Adoptee/China Santa Cruz County, CA Only spread case from the adoptee outbreak Student was given ½ dose IG on 4/6 after exposure to infectious adoptee (4/2-4). Student was then quarantined. No further cases.
--	UT	30-year-old	5/5/04			Yes		Cache county; NIP verified with state this is to be deleted. Result of IgM testing on nursing school student. Not a case, will be deleted.

2004 Measles Outbreaks (3 or more linked cases)							Shaded= IMPORTED source
	Proj	Location(s)	1 st & Last Rash Onsets	# Conf Cases	Ages (or range)	Comments	
1	IOWA	Linn County/ Johnson County	March 13- March 24, 2004	3	19 years 16 years 21 years	Source is India Index is 19 year old unvaccinated US resident with non-medical exemption. He was returning from New Delhi on 3/12. Two spread cases are a passenger seated beside him on plane and his 16-yr-old Sister (both Iowa residents).	
2	Multi-state	Washington (7) Maryland (1) NY State (1) California (1)	March 22 – April 18, 2004	10	12 months to 19 years	Source is China; outbreak among group of adoptees arriving in U.S. on March 26 + 1 spread to unimmunized 19 year old resident from California. Genotype = H1	

Week 19 – Rubella, CRS & Mumps in the U.S.

5/15/04

Rubella - No new rubella cases were reported to MMWR for Week 19. Total rubella reported to MMWR is 14 cases compared to 3 cases for the same period last year. Seven of 14 cases were reported to MMWR in error and will be deleted by Delaware (-4), Missouri (-2), and NJersey (-1). NIP is aware of 7 confirmed rubella cases for 2004 reported by Alaska, Georgia, Missouri, Maryland, New Jersey, Utah and Michigan. Three of the 7 confirmed cases were imported from Bangladesh, Senegal and India.

RUBELLA 2004					
State/ County	Age/sex	rash onset	Import status	Country of birth	
Missouri /Ralls Co.	10 yr old male	1/28/04	indigenous	USA	Positive by State lab; met case definition. Source unknown.
Alaska/ Cordova	8 yr old male	1/30/04	out-of-state	USA	
Georgia /DeKalb Co.	18 yr old female	2/15/04	import	Bangladesh	
NJersey/Bergen Co.	2 yr old male	2/18/04	indigenous	USA	Likely source: Family reported a sick visitor from Saudi Arabia during child's exposure period.
Maryland/ Montgomery Co.	31 yr old pregnant female	---	import	Senegal	Pregnant, asymptomatic, seen in ER in Dec, IgM+; infant was due in Feb No other specimens obtained from Mom or baby
Michigan/Branch Co.	35 yr old inmate	4/4/04	indigenous	USA	Source: unknown. 4/6 serum tested IgM+ but paired IgG (4/6 & 4/20) did not demonstrate rise. Viral culture was negative. CDC will retest serology and perform avidity testing.
Missouri/Ralls Co.	10 yr old male	1/28/04	indigenous	USA	Positive by State lab and negative at CDC; met case definition.
Utah /Salt Lake Co.	27 yr old male	2/23/04	import	India	
Delaware – case id 471, county 5 to be deleted					
Delaware – duplicate 471— to be deleted					

RUBELLA 2004				
State/ County	Age/sex	rash onset	Import status	Country of birth
Delaware – case id 697, county 5 to be deleted				
Delaware - duplicate 697—to be deleted				
Missouri/Clay – case id 249051 to be deleted				
Missouri/Clay – case id 249052 to be deleted				
New Jersey/Essex - case id 90272 to be deleted				

Congenital Rubella Syndrome: New York City reported one CRS for December 2003. The IgM results were positive at State, Quest and CDC Labs. The child had congenital cataracts. Clinical specimens for possible viral isolation were also collected. The mother was born in the Dominican Republic; no travel. She had been identified as non-immune during previous pregnancy. She will be reported as confirmed rubella for 2003. No cases of CRS have been reported in 2004.

Mumps – Six new mumps cases were reported to MMWR during Week 19. Current reported total for mumps is 60 compared with 79 cases for the same period of 2003. Twenty-four states have reported these 60 mumps cases (Calif -11, MI - 5, Ohio - 4; HI - 4). Twenty-five (42%) of cases are ≤15 years of age. For the 49 cases where case status is known, 31 (63%) are confirmed and 18 (37%) are probable. Of the 31 cases with known importation status, 29 are indigenous and 2 were imported. The imported cases were reported by Colorado (Mexico & Japan). Of the 37 cases in NETSS with known race; 26 (70%) are Caucasian, 7 (19%) are Asian/Pacific Islander, 1 is Native American/Alaskan Native, and 3 are African-American. Of the 34 cases with known ethnicity, 8 (24%) are Hispanic.

Send any questions or comments to Dr. Mark Papania, Team Leader for Measles Mumps Rubella Activity at the National Immunization Program or to Ms. Susan Redd at NIP via e-mail to: sbr1@cdc.gov; phone (404) 639-8763/8761; or fax (404) 639-8665. We appreciate knowing of any new Measles-Mumps-Rubella activity in your project area. For measles genotyping results, new publications, press releases etc., please visit the CDC Measles Lab website: <http://www.cdc.gov/ncidod/dvrd/revb/measles/>